

## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

### **Listing of Claims:**

1. (canceled)

2. (canceled)

3. (canceled)

4. (canceled)

5. (canceled)

6. (canceled)

7. (canceled)

8. (canceled)

9. (canceled)

10. (currently amended) A system for maintaining hydrogen purity in an electrical generator, the system comprising:

a hydrogen generator;

a hydrogen cooled electrical generator, said electrical generator fluidly coupled to receive hydrogen gas from said hydrogen generator by a gas conduit;

a vent line having a first and second end, said first end being directly fluidly coupled to said electrical generator and said second end being fluidly coupled to the atmosphere;

a valve coupled to said vent line between said hydrogen cooled generator and said vent line second end;

a hydrogen purity monitor operably coupled to said electrical generator and said valve, said hydrogen purity monitor including means for transmitting a signal to said valve; and,

a pressure transducer fluidly coupled to said conduit, said pressure transducer transmitting a signal to said hydrogen generator in response to the gas pressure in said electrical generator falling below a first threshold wherein said hydrogen generator produces hydrogen gas in response to said pressure transducer signal.

11. (currently amended) The system of claim 10 wherein said valve operates to release hydrogen gas directly from said electrical generator to the atmosphere in response to a signal from said hydrogen purity monitor.

12. (previously presented) The system of claim 11 wherein said hydrogen generator is configured to generate hydrogen gas at a second threshold pressure, said hydrogen generator producing hydrogen gas in response to a reduction in pressure in said electrical generator.

13. (original) The system of claim 12 wherein said hydrogen generator is an electrochemical generator having at least one polymer electrode membrane.

14. (cancelled)

15. (currently amended) The system of claim 13 further comprising a pressure monitor coupled to said hydrogen cooled electrical generator.

16. (previously presented) The system of claim 15 further comprising a ~~hydrogen purifier~~ said hydrogen purity monitor coupled to said electrical generator.

17. (previously presented) The system of claim 12 wherein said hydrogen purity monitor provides a signal to said valve when the purity of hydrogen gas in said electrical generator is less than 99% pure.

18. (previously presented) The system of claim 12 wherein said hydrogen purity monitor provides a signal to said valve when the purity of hydrogen gas in said electrical generator is less than 95% pure.

19. (canceled)

20. (canceled)

21. (canceled)

22. (canceled)

23. (canceled)

24. (canceled)

25. (canceled)

26. (canceled)

27. (canceled)

28. (currently amended) A system for maintaining hydrogen purity in an electrical generator, the system comprising:

a hydrogen generator, said hydrogen generator having means for disassociating water into hydrogen and oxygen gas;

a hydrogen cooled electrical generator coupled to a turbine, said ~~electrical~~ hydrogen generator being fluidly coupled to directly transfer hydrogen gas to said hydrogen cooled electrical generator by a gas conduit;

a vent line having a first and second end, said first end being directly fluidly coupled to said hydrogen cooled electrical generator and said second end being fluidly coupled to the atmosphere;

a valve coupled to said vent line between said hydrogen cooled electrical generator and said vent line second end, said valve being configured to release hydrogen gas from said electrical generator through said vent line at a predetermined hydrogen gas pressure level;

a hydrogen purity monitor operably coupled to said electrical generator and said hydrogen generator; and,

a pressure transducer fluidly coupled to said conduit, said pressure transducer transmitting a signal to said hydrogen generator in response to the gas pressure in said electrical generator falling below a first threshold wherein said hydrogen generator produces hydrogen gas in response to said pressure transducer signal.

29. (previously presented) The system of claim 28 wherein said hydrogen generator produces hydrogen gas at predetermined rate in response to a signal from said pressure transducer.

30. (original) The system of claim 28 wherein said valve releases hydrogen gas when the gas pressure in said electrical generator exceeds 100 psi.

31. (original) The system of claim 29 wherein said hydrogen generator is an electrochemical generator having at least one polymer electrode membrane.

32. (canceled)

33. (canceled)

34. (canceled)

35. (canceled)

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37. (canceled)

38. (canceled)

39. (canceled)

40. (canceled)

41. (canceled)

42. (canceled)

43. (canceled)